**TYPE APPROVAL CERTIFICATE**
No. **ELE450224CS**

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

| | |
|---|---|
| *Description* | **SWITCH DISCONNECTOR** |
| *Type* | **ComPact INS / INV Series**<br>**INS 40, INS 63, INS 80**<br>**INS 250-100, INS 250-160, INS 250-200, INS 250**<br>**INV 100, INV 160, INV 200, INV 250**<br>**INS 320, INS 400, INS 500, INS630**<br>**INV 320, INV 400, INV 500, INV630**<br>**INS 630B, INS 800, INS 1000, INS 1250, INS 1600**<br>**INV 630B, INV 800, INV 1000, INV 1250, INV 1600**<br>**INS 2000, INS 2500**<br>**INV 2000, INV 2500** |
| *Applicant* | **SCHNEIDER ELECTRIC INDUSTRIES SAS**<br>**35 Rue Joseph Monier**<br>**92500 Rueil Malmaison**<br>**FRANCE** |
| *Manufacturer*<br>*Place of manufacture* | **SCHNEIDER ELECTRIC INDUSTRIES SAS - Schneider (Beijing) Low Voltage Co., Ltd**<br>**No.2, Liang Shui He 2nd Street, Beijing Economic Technological Development Area,**<br>**100176 Beijing (Beijing)**<br>**CHINA** |
| *Reference standards* | **RINA Rules for Classification of Ships Part C, Ch 3, Sec. 8; IEC 60947-3:2020, IEC 60947-1:2020** |

*Issued in* **Genoa** on **May 23, 2024**. *This Certificate is valid until* **May 23, 2029**

**RINA Services S.p.A.**
***Luigi Benedetti***

This certificate consists of this page and 1 enclosure

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**TYPE APPROVAL CERTIFICATE**
No. **ELE450224CS**
**Enclosure - Page 1 of 1**
**ComPact INS / INV Series**
**INS 40, INS 63, INS 80**
**INS 250-100, INS 250-160, INS 250-200, INS 250**
**INV 100, INV 160, INV 200, INV 250**
**INS 320, INS 400, INS 500, INS630**
**INV 320, INV 400, INV 500, INV630**
**INS 630B, INS 800, INS 1000, INS 1250, INS 1600**
**INV 630B, INV 800, INV 1000, INV 1250, INV 1600**
**INS 2000, INS 2500**
**INV 2000, INV 2500**

*Alternative Manufacturer*:

SCHNEIDER ELECTRIC INDUSTRIES POLSKA SP.Z.O.O

*Alternative Place of Manufacturer*:

UL. Mostowa 19
32 - 332 Bukowno
POLAND

INS 40; INS 63; INS 80

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440 Vac, 500 Vac, // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 40A-INS40, 63A-INS63, 80A-INS80 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 8kV |
| Rated insulation voltage **Ui** | 690V |

Rated operational current **Ie**:

| Utilization category | INS 40 | INS 63 | INS 80 |
|---|---|---|---|
| AC-21A/ 22 A / 23A 240Vac | 40 A | 63 A | 80 A |
| AC-21A / 22A 415Vac | 40 A | 63 A | 80 A |
| AC-23 A 415Vac | 40 A | 63 A | 72 A |
| AC-21 A / 22 A 440Vac | 40 A | 63 A | 80 A |
| AC-23 A 440Vac | 40 A | 63 A | 63 A |
| AC-21A / 22A 500Vac | 40 A | 63 A | 80 A |
| AC-23 A 500Vac | 32 A | 40 A | 40 A |
| DC-22A / 23A 250Vdc<br>4 Poles in series | 40 A | 63 A | 80 A |

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**INS 250-100; INS 250-160; INS250-200; INS250**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440/480 Vac, 500/525 Vac, 660/690Vac<br>// 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 100A for INS 250-100, 160A for INS 250-160,<br>200A for INS 250-200, 250A for INS 250 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 8kV |
| Rated insulation voltage **Ui** | 800V |

Rated operational current **Ie**:

| Utilization category | INS 250-100 A | INS 250-160 A | INS 250-200 A | INS 250 |
|---|---|---|---|---|
| AC-22 A / 23 A 240Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 415Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 480Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 525Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 690Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 250Vac<br>4 Poles in series | 100 A | 160 A | 200 A | 250 A |

**INV 100; INV 160; INV 200; INV250**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440/480 Vac, 500/525 Vac, 660/690Vac<br>// 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 100A for INV 100, 160A for INV 160,<br>200A for INV 200, 250A for INV 250 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 8kV |
| Rated insulation voltage **Ui** | 800V |

Rated operational current **Ie**:

| Utilization category | INS 100 A | INS 160 A | INS 200 A | INS 250 |
|---|---|---|---|---|
| AC-22 A / 23 A 240Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 415Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 480Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 525Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 690Vac | 100 A | 160 A | 200 A | 250 A |
| AC-22 A / 23 A 250Vac<br>4 Poles in series | 100 A | 160 A | 200 A | 250 A |

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**INS 320; INS 400; INS 500; INS 630**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440/480 Vac, 500/525 Vac, 660/690Vac // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 320A for INS 320, 400A for INS 400,<br>500A for INS 500, 630A for INS 630 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 8kV |
| Rated insulation voltage **Ui** | 800V |

Rated operational current **Ie**:

| Utilization category | | INS 320 | INS 400 | INS 500 | INS 630 |
|---|---|---|---|---|---|
| AC-22 A / 23 A | 240Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 415Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 480Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 525Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 690Vac | 320 A | 400 A | 500 A | 630 A |
| DC-22 A / 23 A | 250Vdc | 320 A | 400 A | 500 A | 550 A |
| DC-22 B / 23 B | 250Vdc | --- | --- | --- | 630 A |
| 4 Poles in series | | | | | |

**INV 320; INV 400; INV 500; INV 630**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440/480 Vac, 500/525 Vac, 660/690Vac // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 320A for INV 320, 400A for INV 400,<br>500A for INV 500, 630A for INV 630, see **Ie** according to Utilization category |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 8kV |
| Rated insulation voltage **Ui** | 800V |

Rated operational current **Ie**:

| Utilization category | | INV 320 | INV 400 | INV 500 | INV 630 |
|---|---|---|---|---|---|
| AC-22 A / 23 A | 240Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 415Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 480Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 525Vac | 320 A | 400 A | 500 A | 630 A |
| AC-22 A / 23 A | 690Vac | 320 A | 400 A | 500 A | 630 A |
| DC-22 A / 23 A | 250Vdc | 320 A | 400 A | 500 A | 550 A |
| DC-22 B / 23 B | 250Vdc | --- | --- | --- | 630 A |
| 4 Poles in series | | | | | |

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**INS 630B, INS 800; INS 1000; INS 1250; INS 1600**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for DC | 4 poles in series |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440 Vac, 500 Vac, // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 630 A for INS 630B, 800A for INS 800, 1000A for INS 1000, 1250A for INS 1250, 1250A, 1450A, 1600A for INS 1600 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 12kV |
| Rated insulation voltage **Ui** | 1000V |

Rated operational current **Ie**:

| Utilization category | INS 630B | INS 800 | INS 1000 | INS 1250 | INS 1600 |
|---|---|---|---|---|---|
| AC-21 A / 22A / 23 A 240Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 415Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 480Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 525Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 690Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| DC-21A; DC-22A; DC-23A<br>250 Vdc<br>4 Poles in Series | - | 800 A | 1000 A | 1250 A | 1600 A |

**INV 630B, INV 800; INV 1000; INV 1250; INV 1600**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for DC | 4 poles in series |
| Number of poles for AC | 3 poles, 4 poles with switch neutral, 4 poles with solid neutral |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415, 440/480 Vac, 500/525 Vac, 660/690 // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 630 A for INV 630B, 800A for INV 800, 1000A for INV 1000, 1250A for INV 1250, 1250A, 1450A, 1600A for INV 1600 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 12kV |
| Rated insulation voltage **Ui** | 1000V |

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Rated operational current **Ie**:

| Utilization category | INV 630B | INV 800 | INV 1000 | INV 1250 | INV 1600 |
|---|---|---|---|---|---|
| AC-21 A / 22A / 23 A 240Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 415Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 480Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 525Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| AC-21 A / 22A / 23 A 690Vac<br>AC-21A/B; AC-22A/B<br>AC-23A | 630 A | 800 A | 1000 A | 1250 A | ----<br>1250/1600 A<br>1250 A |
| DC-21A; DC-22A; DC-23A<br>250 Vdc<br>4 Poles in Series | - | 800 A | 1000 A | 1250 A | 1600 A |

**INS 2000; INS 2500**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415 Vac, 440/480 Vac, 500/525Vac, 660/690 // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 2000 A for INS 2000B<br>2500 A for INS 2500 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 12kV |
| Rated insulation voltage **Ui** | 1000V |

Rated operational current **Ie**:

| Utilization category | | INV 630B | INV 800 |
|---|---|---|---|
| AC-21 B; AC-22 B | 240 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 415 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 480 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 525 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 690 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B<br>4 Poles in series | 250 Vac | 2000 | 2500 |

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**INV 2000; INV 2500**

| | |
|---|---|
| Method of operation | Indipendent manual operation |
| Suitability for isolation | Suitable |
| Number of poles for AC | 3 poles, 4 poles with switch neutral |
| Number of poles for DC | 4 poles in series |
| Rated operational voltage **Ue** | 220/240 Vac, 380/415 Vac, 440/480 Vac, 500/525Vac, 660/690 // 250 Vdc |
| Rated operational current **Ie=Ith** (Tamb = 60°C) | 2000 A for INV 2000B<br>2500 A for INV 2500 |
| Rated frequency | 50/60 Hz |
| Rated impulse withstand voltage **Uimp** | 12kV |
| Rated insulation voltage **Ui** | 1000V |

Rated operational current **Ie**:

| Utilization category | | INV 2000 | INV 2500 |
|---|---|---|---|
| AC-21 B; AC-22 B | 240 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 415 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 480 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 525 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B | 690 Vac | 2000 | 2500 |
| AC-21 B; AC-22 B<br>4 Poles in series | 250 Vac | 2000 | 2500 |

**Reference Documents:**

ISO 9001 Certificate No. 195538-U-A121 : SCHNEIDER ELECTRIC INDUSTRIES POLSKA SP. Z.O.O

ISO 9001 Certificate No. CNBJ195538-3-UK : SCHNEIDER (BEIJING) LOW VOLTAGE CO., LTD.

**Data sheet:**

Catalogue No. LVPED213024EN

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**Certificates and Test Reports:**

| | | |
|---|---|---|
| DEKRA - CB Test Certificates: | No. NL-31483-CB-DEKRA<br>No. NL-31484-CB-DEKRA<br>No. NL-31485-CB-DEKRA<br>No. NL-31486-CB-DEKRA<br>No. NL-31487-CB-DEKRA<br>No. NL-31488-CB-DEKRA<br>No. NL-31489-CB-DEKRA<br>No. NL-31490-CB-DEKRA<br>No. NL-31491-CB-DEKRA | 16/06/2014 |
| DEKRA Test Reports | No. 2171689-50-CB-Dekra<br>No. 2171689-51-CB-Dekra<br>No. 2171689-52-CB-Dekra<br>No. 2171689-53-CB-Dekra<br>No. 2171689-54-CB-Dekra<br>No. 2171689-55-CB-Dekra<br>No. 2171689-56-CB-Dekra<br>No. 2171689-57-CB-Dekra<br>No. 2171689-58-CB-Dekra<br>No. 2171689-59-CB-Dekra | |
| TUV - CB Test Certificates<br>Compliance to:<br>IEC60947-1:2020<br>IEC90947-3:2020 | No. HU-004507<br>No. HU-004508<br>No. HU-004509<br>No. HU-004510<br>No. HU-004511<br>No. HU-004512<br>No. HU-004513<br>No. HU-004514<br>No. HU-004515<br>No. HU-004516 | 18/09/2024 |
| TUV - Test Reports<br>Compliance to:<br>IEC60947-1:2020<br>IEC90947-3:2020 | No. HU23S1K6 001<br>No. HU23S2K5 001<br>No. HU23S80A 001<br>No. HU23S160 001<br>No. HU23S250 001<br>No. HU23S630 001<br>No. HU23V1K6 001<br>No. HU23V2K5 001<br>No. HU23V250 001<br>No. HU23V630 001 | |
| Test Report<br>Compliance to IACS UR E10 | No. 24119Y30054 | 20/01/2025 |

Remarks:
Validity of this certificate is subject to satisfactory outcome of yearly audit as per RINA " Rules for Testing and Certification of Marine Materials and Equipment".

**Genoa May 23, 2024**

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